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INVESTIGATION OF THE SMOOTH START-UP OF AN INDUCTION MOTOR

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Abstract

The results of theoretical analysis and experimental investigation of the start of the asynchronous motor ANP71A2U3 with the use of the soft start device ATS 01N21QN are presented. Two modes of operation of the device are considered, providing different start-up

times. In mathematical modeling, the non-sinusoidal nature of the motor supply voltage and the presence of the spatial harmonic magnetic field of the motor are taken into account. The parameters of the substitution circuit used as nonlinear coefficients in the system of differential equations are calculated taking into account the saturation of the magnetic circuit and the displacement of the current in the rotor winding. References 11, figures 5.

Key words: induction motor, soft starter, parametric phase control, start time, experimental studies, Mathematical simulation of start-up.

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